Chapter I: Executive Summary

Introduction

Utah's surface water resources include 14,250 miles of rivers and streams, nearly 3,000 lake and reservoirs. Utah is the second driest state in the country and these waters play a major role in the private, commercial and industrial development of the state. They are sources of drinking water, provide enormous recreational opportunities, sustain a wide variety of wildlife, and provide water for agricultural production. Utah's beneficial use classifications for waters of the state are listed in Table VI-5.

Utah assesses the quality of its surface water resources to protect it for drinking, fishing, boating, irrigation, stock watering, and supporting aquatic wildlife. Data are compared against State water quality standards to determine beneficial use support (DWQ, 2000). Various reports are written and disseminated to project sponsors, local and state officials, government and private entities and the public to expand the awareness of the need to protect and enhance the water quality of Utah's rivers, streams, lakes and reservoirs. In addition, water quality data are used to identify impaired waterbodies and establish water quality goals for implementing projects to restore or protect water quality. Water quality data are also collected to do Total Maximum Daily Load analyses for discharge permits and to assure that permit requirements under the Utah Pollution Discharge Elimination System (UPDES) program are being met. Data are also collected to evaluate the effectiveness of nonpoint source projects, and to do TMDL analyses on selected waterbodies or watersheds.

Stream Monitoring

The stream monitoring program consists of basin intensive and long-term ambient water quality monitoring stations. The fixed-station monitoring network consisted of 64 stations. These stations will be used to evaluate long-term water quality trends. Samples are collected every six weeks (eight times per year).

The data collected and analyzed provide essential river and stream water quality assessment data to identify and quantify water quality problems that may exist and provide background information for the development of possible solutions to those problems. They also allow water quality programs to be focused on critical areas, and allow the Division of Water Quality to prioritize its management plans. The data are used to determine the effectiveness of the Division's water quality management plans and to assist individuals and agencies involved in protecting the quality of the State's waters.

Rivers / Streams Assessment

For the purposes of this report, the statewide assessment consists of the summary evaluations of two intensive monitoring surveys. These two watershed management units were the Sevier River and the Utah Lake-Jordan River systems. These were combined with previous surveys done in the Bear River, Weber River, Uinta, Colorado River West, Colorado River Southeast, Cedar/Beaver and Lower Colorado Watershed Management Units (Figure I-1).

Assessments were done on some streams within these latter watershed units and the results of previous assessments were updated.

Data collected by the Division of Water Quality and others were assessed following the procedures described in Chapter VI. Data were obtained through cooperative agreements with the U.S. Forest Service, U.S. Bureau of Land Management, Salt Lake City, Central Utah

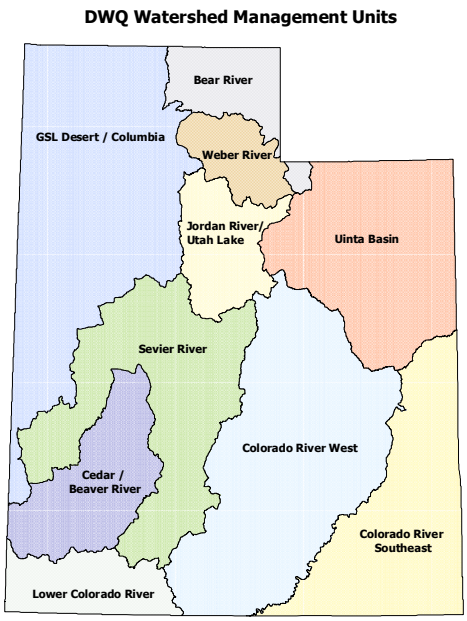

Figure I-1. Watershed Management Units.

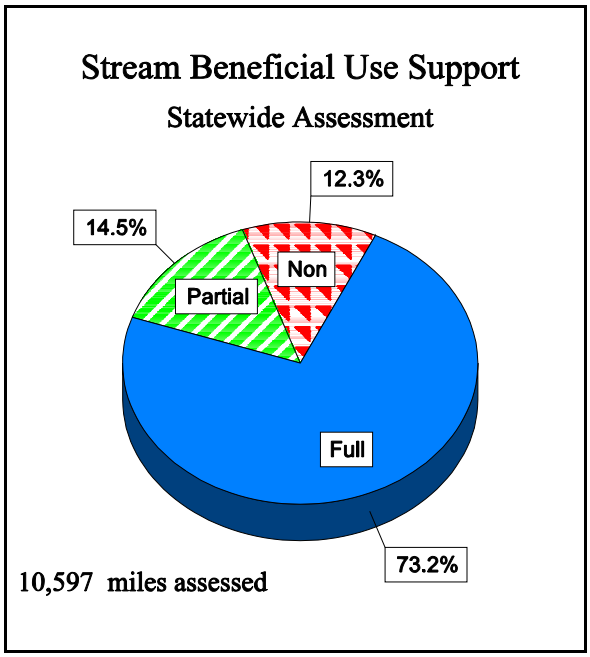

Figure I-2. River / Stream beneficial use assessment.

Conservancy District, and the Jordanelle Technical Advisory Committee. These cooperative agreements included the collection and processing of samples at the State Health Laboratory. Data collected by the United States Geological Survey for their Great Salt Lake Basins NAWQA program, benthic macroinvertebrate and sediment data collected by Dr. Lawrence Gray of Utah Valley State College, and fish tissue data collected by the Uinta National Forest were also used to assess water quality.

Utah assessed approximately 10,597 miles of perennial streams. This is 74.4% of the perennial stream miles in the state and is based upon the State's most recent stream mileage calculations. This is less that EPA's estimates of 16,497 miles, but the State's estimate is considered more accurate. Of the miles assessed, 73.2% were assessed as fully supporting, 14.5% as partially supporting, and 12.3% as not supporting at least one beneficial use designation (Figure I-2).

A map of the overall beneficial use support for the state can be found in Chapter II, Figure II-2. However, the majority of streams were not assessed for Class 2B (contact recreation) Therefore, the assessment is primarily based on Class 1C (source of drinking water), aquatic life beneficial uses (3A, 3B, 3C, and 3D), and Class 4 (agriculture use). Table I-1 lists individual beneficial use support.

The major causes of water quality impairment are total dissolved solids, nutrients, sediments, and stream habitat alterations. Stream habitat alterations include riparian habitat and in-stream habitat. The major sources of pollutants are agriculture, natural sources, hydrological modification, and habitat modification. About 2% percent of the stream miles are affected by point source discharges. Agricultural practices, such as grazing and irrigation, caused increased nutrient and sediment loading into streams. Point sources are also responsible for nutrient input into streams, while natural sources contributed metals, total dissolved solids and sediments to streams in some areas. Resource extraction and associated practices such as road construction contributed significantly to

impairment of water quality also.

Utah's proposed 303(d) list includes 84 stream waterbodies. Because multiple factors affect some of the waterbodies, 122 parameters were listed for TMDL analysis.

Lakes / Reservoirs

The 131 lakes assessed during this reporting cycle account for 95% (460,642 acres) of the total lake acreage in the state. When accounting by acreage, 69% was found supporting its designated uses, 31% was partially supporting and about 0.4% was not supporting designated uses.

Of the 131 lakes surveyed, 71 (54%) were fully supporting, 49 (37%) partially supporting, and 11 (8%) not supporting.

The causes of impairment in lakes and reservoirs continue to be nutrients, siltation, low dissolved oxygen, suspended solids, organic enrichment, and noxious aquatic plants.

The major sources of pollutants causing impairments are nonpoint sources, agricultural practices, industrial and municipal point sources, and habitat modification (draw-down of reservoirs).

Forty-three lakes remain on the 303(d) list, including a total of 69 parameters that need TMDL analysis. No lakes have been added to the list since the last reporting cycle. However, TMDLs for seven lakes have been written and approved by EPA. We will request that these be removed in the next reporting cycle. Nine additional lakes fell into the partially supporting category and one into the non-supporting category. Some of these 10 lakes have fluctuated in and out of full support status for several reporting cycles, while others, we feel, came under additional stress due to drought conditions. Figure I-3 shows the lake beneficial use assessment for this report.

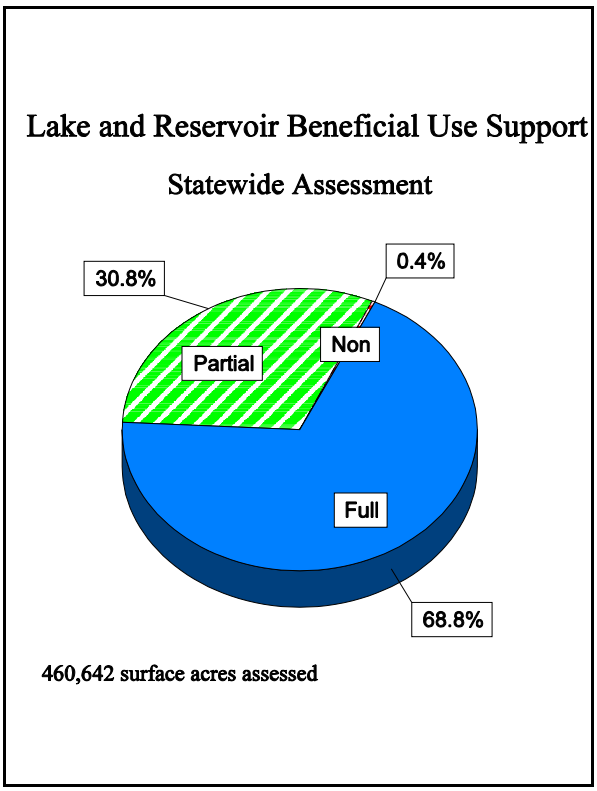

Figure I-3. Lake / Reservoir beneficial use assessment.

Table I-1. Individual Use Support Summary							
Goals[a]	**Use**	**Size Assessed**	**Size Fully Supporting**	**Size Fully Supporting but Threatened**	**Size Partially Supporting**	**Size Not Supporting**	**Size Not Attainable**
Protect & Enhance Ecosystems	Aquatic Life	10,543.0	8868.9 (85.2%)	-	1532.6 (12.4%)	364.7 (3.5%)	0.0
Protect & Enhance Public Health	Fish Consumption	46.8	0.0	-	0.0	46.8 (1005)	0.0
	Swimming[b]	185.4	86.0 (46.5%)	-	89.6 (48.3%)	9.8 (5.2%)	0.0
	Secondary Contact	185.4	86.0 (46.5%)	-	89.6 (48.3%)	9.8 (5.2%)	0.0
	Drinking Water	3,883.6	3,799.9 (97.3%)	-	45.1 (1.2%)	38.5 (1.1%)	0.0
Social and Economic	Agricultural	10,244.1	8,732.2 (85.3%)	-	483.7 (4.7%)	1,026.2 (10.0%)	0.0
	Overall Use Support	10,597.0	7,760.9 (73.2%)	0.0	1,532.6 (14.5%)	1,303.9 (12.3%)	0.0

[a] These goals are part of the national water quality goals adopted by the EPA Office of Water and the ITFM in their Environmental Goals and Indicators effort.
[b] Class 2B (secondary contact) streams were evaluated as swimmable for proposes of the CWA goals, therefore the swimming and secondary contact classification categories are the same.